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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,687	07/14/2003	Toshihito Habuka	H-1103	4123

7590

12/13/2006

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EXAMINER
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BOCURE, TESFALDET

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/617,687

Applicant(s)

HABUKA ET AL.

Examiner

Tesfaldet Bocure

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,8 and 11-14, 16-17 is/are allowed.
- 6) ☐ Claim(s) 1-6,9,10 and 15 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/14/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The Information Disclosure Statement (IDS) received on July 14, 2003 has been considered. However, there a second duplicate copy received on the same date, which is not considered by the Examiner because the cited reference is the same as that of the one considered.

### *Specification*

3. The disclosure is objected to because of the following informalities: The disclosed subject matter of the antenna switch 4 with respect to figure 1 in page 15, lines 13-14, where "---antenna switch 4 is controlled by the antenna switchover signal AS output from the **gain control circuit 19**" should be amended to read as --- "--- antenna switch 4 is controlled by the antenna switchover signal AS output from the **control circuit 27**---. See the output signal As from the control circuit 27 controlling the switch 4 in figure 1.

Appropriate correction is required.

***Claim Objections***

4. Claim 18 is objected to because of the following informalities: the claimed "second measurement circuit," "second signal level" in claim 18 should be amended to read as --- measurement circuit--- and ---first signal level---respectively.

It should be noted that claim 18, which is independent claim, does not call for a first measurement circuit and first signal level in order to claim second, in other word, there is no first claimed to claim second. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 9 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9: "said transmission baseband amplifier" in claim 9, line 7 lacks a clear antecedent basis.

Claim 15: "said first and second gain setting" in line 2 lacks a clear antecedent basis.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by **Sugawara** (US patent number 5,339,452).

Teaches a receiver for controlling the gain of the amplifier comprising a measurement circuit (14) for measuring the level of the received signal and controller (5) for controlling the switch (SWs) to switch between the two antennas, which receives the best signal according to the detected level of the received signal.

It should be noted that if the level of the received signal by any of the antenna is detected to be within the acceptable level the receiver will be utilizing the same antenna otherwise switch to the second one. See background of the invention in col. 1 and the corresponding text with respect to figs 1 and 2.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by **Jong** (UK Patent Application No. GB 2-316-558 A).

**Jong** teaches a receiver for controlling the gain of the phase modulated QPSK signal comprising: a front end of the receiver (21 fig. 2, claimed 1 high frequency processor); and a second part (25 in figure 2 and 30 in fig. 3) for processing the carrier

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recovered, claimed baseband processor, Inphase and Quadrature signal and controlling the gain of the received signal.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jong** (UK Patent Application No. GB 2-316-558 A).

**Jong** teaches a receiver for controlling the gain of the phase modulated QPSK signal comprising: a front end of the receiver (21 fig. 2, claimed 1 high frequency processor); and a second part (25 in figure 2 and 30 in fig. 3) for processing the carrier

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recovered, claimed baseband processor, Inphase and Quadrature signal and controlling the gain of the received signal.

**Jong** does not show that the first processor 21 and second processor 25 and 30 are placed in a first and second semiconductor integrated circuit, however it obvious design choice to place the first and the second processor in a separate IC circuit at the time the invention was made.

Further to claims 3-5 **Jong** also teaches that: the Inphase (I) and Quadrature (Q) signal processed to be used as a control signal for controlling the gain of the amplifiers are first put in absolute form (claim 5), summed (as in claim 3) and squared (as in claim 4). See figure 3 for the absolute value calculator and magnitude calculator and the corresponding equations in the disclosure.

### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jong** (UK Patent Application No. GB 2-316-558 A) as applied to claim 1 above, and further in view of **Hughes et al.**, **Hughes** hereinafter (US patent number 6,754,479).

**Jong** teaches the claimed subject matter in claims 1 as indicated above.

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What **Jong** fails to teach is that measurement is logarithmically compressed signal as in claim 2.

**Hughes** teaches a receiver having means for controlling the gain of the amplifier having means for logarithmically compressing the control signal which controls the amplifier 116 (see fig.15).

The logarithmically compressed data output used to control the gain of the amplifier would adjust the magnitude (power) with a value approximate the square of the magnitude to the predetermined amount of precision of the N significant bits of a small width (see col. 16, starting line 38 through col. 17, line 3 and claim1).

Therefore, it would have been obvious to one of an ordinary skill in the art to use the logarithmically compressed data represented by fewer bits resulting in less complex calculation to control the gain of the amplifier at the time the invention was made.

***Allowable Subject Matter***

16. Claims 7,8 and 11-18 are allowed.

17. Claims 9 and 15 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The claimed gain setting values are time division data in claims 8 and 15 is interpreted in light of the specification where the data are corresponding to the first and second measurement values from the corresponding measurement circuits.



***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Publication number 2002/0086651 issued to Prentice et al. and US patent numbers 5,696,798, 6,009,317, 6,735,422 and 6,856,946 issued to Wright et al., Wynn, Baldwin et al and Dathe et al. respectively disclose a receiver having means for controlling the gain of the amplifier.

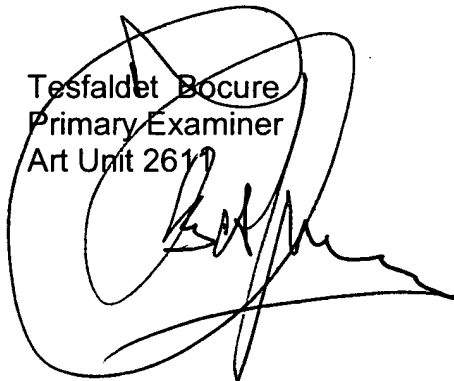
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (571) 272-3015. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti (Jay) Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tesfaldet Bocure  
Primary Examiner  
Art Unit 2611

A handwritten signature in black ink, appearing to read 'Tesfaldet Bocure', is written over the printed name and title.

T.Bocure